

***AN ARCHAEOLOGICAL SURVEY  
FOR SKLAR EXPLORATION COMPANY, LLC'S  
SOUTH MORTON 12-2 WELL PAD SITE AND  
ACCESS ROAD IN SMITH COUNTY, MISSISSIPPI***



**By**

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**Brazos Valley Research Associates  
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COMPANY, LLC'S SOUTH MORTON 12-2 WELL PAD SITE AND ACCESS  
ROAD IN SMITH COUNTY, MISSISSIPPI

BVRA Project Number 08-18

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## **ABSTRACT**

An archaeological survey of a proposed drill site and access road in Smith County, Mississippi was performed by Rita D. Fields as a subcontractor to Brazos Valley Research Associates (BVRA) and Dixie Environmental Services Company, LLP. (DESCO) on May 23, 2008 under an Archaeological Resource Protection Act permit issued by the Bienville National Forest. The area was investigated by a surface inspection and shovel testing. One historic site (22-Sm-1337) was found within the footprint of the well pad, and no cultural materials were observed along the proposed access road. This is a house site or logging camp that dates to the late 19<sup>th</sup> Century or early 20<sup>th</sup> Century based on artifacts recovered from shovel tests and on the surface. In addition, two chert flakes were recovered through shovel testing. Since isolated flakes can be found throughout the forest, the presence of these materials is considered to be an isolated occurrence and not a separate prehistoric component. The site area has been disturbed through occupational disturbances. This site is located in Compartment 258. Because of the amount of disturbance present, this site is not considered eligible for listing in the National Register of Historic Places, and no further work is warranted. Copies of this report are on file at the Bienville National Forest, the Mississippi Department of Archives and History (MDAH), DESCO, and with the authors. The artifacts and records are housed at the Bienville National Forest.

The cultural resources survey followed the survey guidelines set forth by the MDAH. The survey was performed in compliance with the Procedures of the Advisory Council on Historic Preservations (36 CFR 800); the National Historic Preservation Act of 1966 (PL 89-665), as amended; the National Environmental Policy Act of 1969 (PL 91-190, 83 Stat. 915, 42 USC 4231m 1970); the Archaeological Resource Protection Act of 1979, and other appropriate cultural resources legislation and guidelines, as well as the guidelines set forth by the Register of Professional Archaeologists.

## **ACKNOWLEDGMENTS**

The authors are grateful to those who made the successful completion of this project possible. Terry L. McClung, Bienville National Forest archaeologist, assisted in the permit application process and provided insight into the previous work in the area. The report was reviewed by David O. Abbot of MDAH and Terry L. McClung. Maps and additional support were provided by Tanya Matherne and Jackie Smith of DESCO. The figures used in this report were prepared by Jackie Gilliam of DESCO and Lili G. Lyddon of LL Technical Services.

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## INTRODUCTION

Sklar Exploration Company, LLC plans to construct the South Morton 12-2 well pad and access road within the Bienville National Forest (Section 12, Township 4 North, Range 6 East), Smith County, Mississippi (Figure 1). The project area is about four miles southeast of Polkville, Mississippi. Topographic coverage is provided by the USGS Polkville 7.5' quadrangle dated 1980 (Figure 2). The project area is located within Compartment 258 of the Bienville Ranger District. The footprint of the well pad site is 350 feet x 350 feet (2.81 acres), and the access road is 187 feet long by 30 feet wide (0.13 acre). The proposed access road connects to a gravel road that leads to a drill site. The nearest numbered Forest Service road is 538-J. Construction plans call for a well in the center of the pad site that will be constructed above ground. Except for the drill hole, the only subsurface disturbance will be some minimal scraping at the apex of the landform to level the site for construction of the pad. An existing access road will be used with no subsurface modifications planned. This site is on an upland ridge approximately 750 feet east of Davis Creek, and the Strong River is approximately 4500 feet to the east. The setting for the well site and access road was viewed by BVRA as a high probability area for the presence of a prehistoric or historic site because of its location on an elevated landform in close proximity to a creek.

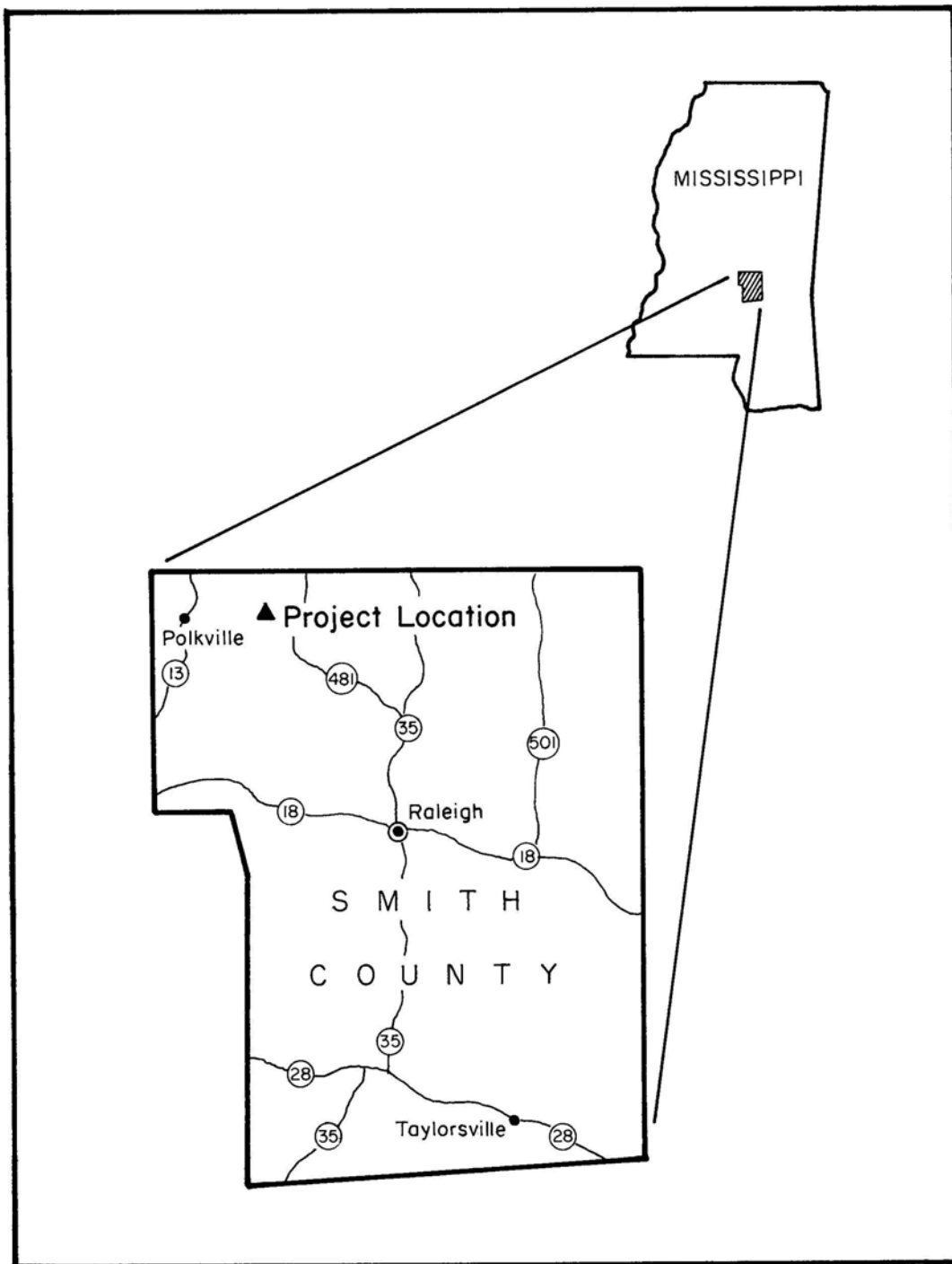


Figure 1. General Location



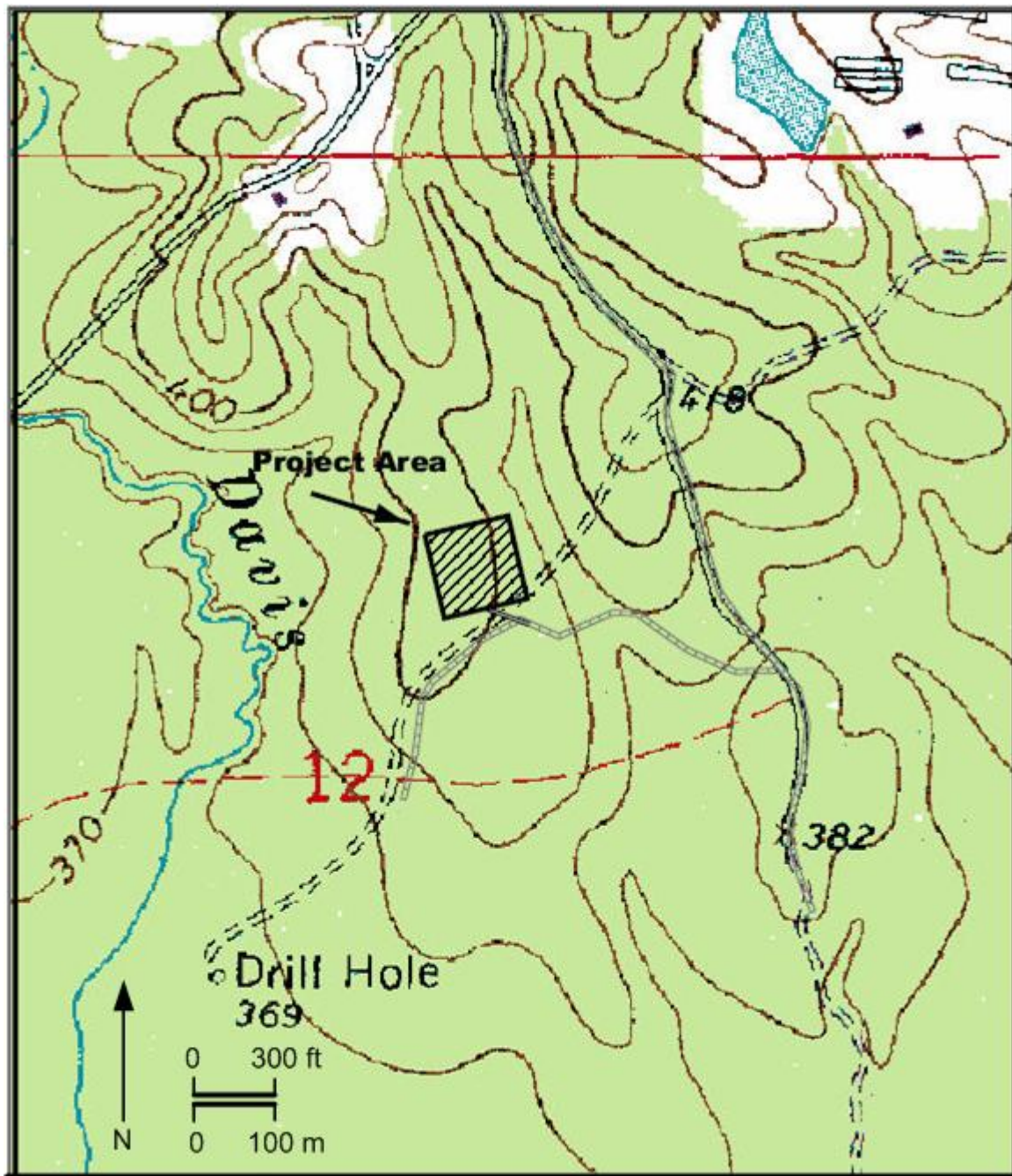


Figure 2. Project Area on Topographic Map Polkville



## ENVIRONMENTAL SETTING

The Morton South 12-2 well pad and access road are located in Smith County within the confines of the Bienville National Forest. The Bienville National Forest consists of 178,367 acres and is located in central Mississippi. The Bienville National Forest is one of six national forests located in the state of Mississippi and provides recreational opportunities as well as wildlife and timber management plans. Smith County, Mississippi is located within the East Gulf subregion of the Coastal Plain Physiographic Province as described by Fenneman (1938). This area is characterized by a series of belts, with each belt distinguished by a specific topography relating to various geologic structures. According to an early 19<sup>th</sup> Century report by Goodspeed (1891:242), the physiography of Smith County is characterized as “partly rich bottom lands, partly hill lands, free and productive...” The project area is also located in the Central/Southern Pine Hills region that is bounded on the north by the Jackson Prairie physiographic unit and on the south by the Coastal Pine Meadows of the Mississippi Gulf Coast. In general, the Pine Hills region is characterized by moderately high rolling upland ridges separated by V-shaped ravines containing intermittent drains or springs and/or permanent streams and creeks. Elevation varies throughout the Pine Hills. Moderate to high hilltops are not uncommon with most of the area averaging between 300 to 500 feet above mean sea level (Cross and Wales 1974). In a report by Moore and Fields (2007), the environmental setting of the Bienville National Forest is discussed in more detail. The two major drainages in the vicinity of the project area are Davis Creek to the west and the Strong River to the northeast. The well site is located on a narrow ridge that consists of mixed hardwoods and an understory of briars and vines (Figure 3). Currently, there is no published soil survey for Smith County, Mississippi. Therefore, the following information was taken from files at the Bienville National Forest. According to an in-house soils map prepared by forester John K. Lee of the Bienville National Forest, Ranger District Office, the soils in the project area consist of Savannah fine sandy loam, 2 to 5% slope (SaB). This is an upland soil that has a 0% chance of flooding. Artifacts made from a wide diversity of raw material have been found at sites in the region. Identified materials recovered from other sites in the forest include Citronelle gravel chert, Fort Payne chert, Catahoula quartzite, Kosciusko quartzite, Tallahatta quartzite, quartz, sandstone, and chalcedony. Rita D. Fields discusses these materials in detail in a report by Moore and Fields (2007:7-10).



Figure 3. General View of Area at Well Site (looking west)

## PREVIOUS INVESTIGATIONS

A number of previous surveys have been conducted in the general area, and most of the work in the forest is associated with land exchange, timber sales, and oil and gas leases. Copies of reports describing these surveys are on file at the Bienville National Forest (Ranger District office) and MDAH.

Several cultural resource surveys have been conducted within a radius of one-mile with the majority of these to the northwest. Within this area, two investigations were carried out in close proximity to the current project area. Of the two nearest investigations, the largest study was conducted in 1995 by Robert Bryan (1995) for a timber stand sale and consisted of two separate areas to the northeast and southeast in compartments 255 and 258. Five prehistoric sites (22-Sm-652 – 22-Sm-656) and one historic site (95-264-SR-1-H) were identified. The prehistoric sites are small, and they vary in size from 0.2 acre to 0.6 acre. Landforms on which the sites are located include upland ridges, a hilltop, and a ridge bluff with elevations between 390 feet and 420 feet above mean sea level. Artifact density was considered to be light at all five sites, and artifacts recovered include flakes, biface fragments, shatter, and two projectile points. The only site that can be assigned to a specific temporal period is 22-Sm-653, where a *Collins* point was recovered. Based on the presence of this diagnostic specimen, this site dates to sometime between the Middle and Late Woodland periods (circa 100 B.C. – A.D. 1000). A reworked projectile point was found at site 22-Sm-656. This projectile point was not assigned to a known type. The function of these sites is not known at this time. The single (0.15 acre) historic site is located on an upland ridge at approximately 450 feet above mean sea level. It is described in the report as a house site or homestead that has been disturbed, probably through logging activities. The date of this site is not known, but the artifacts found at this site date mainly to the early 20<sup>th</sup> Century. All six sites are not eligible for listing in the National Register of Historic Places.

Immediately to the south, the Morton South 12-1 well pad and access road was surveyed for cultural resources by BVRA in 2005 (Moore and Baxter 2005). The project area is in Compartment 258 of the Bienville Ranger District. The well pad footprint consisted of 3.67 acres, and the access road was .5 miles in length. The soils in the area are Savannah fine sandy loam, an upland soil. In all, 23 shovel tests were excavated at the well pad site, and 25 shovel tests were dug along the proposed access road. Soils in the area consisted of a shallow fine sandy loam over clay. No gravels or raw materials that could have been used to make stone tools were present. No sites were found, and it was recommended that construction be allowed to proceed. This project was performed under an ARPA permit issued by the Bienville National Forest.

Known prehistoric sites in the Bienville National Forest include permanent campsites, temporary special use camps, and isolated occurrences of artifacts and debitage. Sites in the forest date to the Archaic, Woodland, and Mississippian periods. No Paleo-Indian sites have been recorded. Historic sites consist of homesteads, logging camps and features, and non-residential areas such as roads and bridges. Most historic sites were constructed or occupied during the late 19<sup>th</sup> Century and early 20<sup>th</sup> Century. The research potential for most sites in the forest is unknown, and few sites have been determined to be eligible for listing in the National Register of Historic Places.

## **METHODS OF INVESTIGATION**

### **Pre-Field Tasks**

Prior to entering the field, Rita D. Fields conducted an archival background check at MDAH. Site files were checked for the presence of known sites and previous surveys in the project area and vicinity. Relevant archaeological reports documenting work in Smith County were reviewed in order to become familiar with the types of prehistoric and historic sites found in the area.

### **Field Survey**

The area was investigated by Rita D. Fields on May 23, 2008. The entire area was walked and visually inspected for surface indications of an archaeological site. The subsurface was examined through shovel testing. At the time of her visit the area was very wet from recent rains. Therefore, normal screening was not possible. The wet, muddy soil was placed in a screen and examined by hand. When possible, the soil was pushed through the quarter-inch hardware cloth. Relevant shovel test data were entered in the field notes, and this information appears in this report as Appendix I. Shovel test locations are depicted in Figure 4. The initial three tests were excavated at intervals of 20 meters along the access road. Next, shovel tests were excavated in a grid pattern over the well pad. This grid began at the southwest corner with Shovel Test 4 and proceeded to the north where it was terminated with the excavation of Shovel Test 7. In all, 16 tests were excavated along the four transects that were spaced at intervals of 30 meters. On the third transect, four wire nails were found in Shovel Test 13. Following the completion of shovel testing along the grid, Ms Fields began the process of site delineation. Fourteen shovel tests were placed in a grid pattern at intervals of five meters in the four cardinal directions. The soil in this area was shallow and disturbed. Because of the disturbance and the wet nature of the soil, the tests were not dug in arbitrary levels. All artifacts were collected for analysis and cataloging in the laboratory by Ms. Fields. The project was documented by field notes and digital photography.

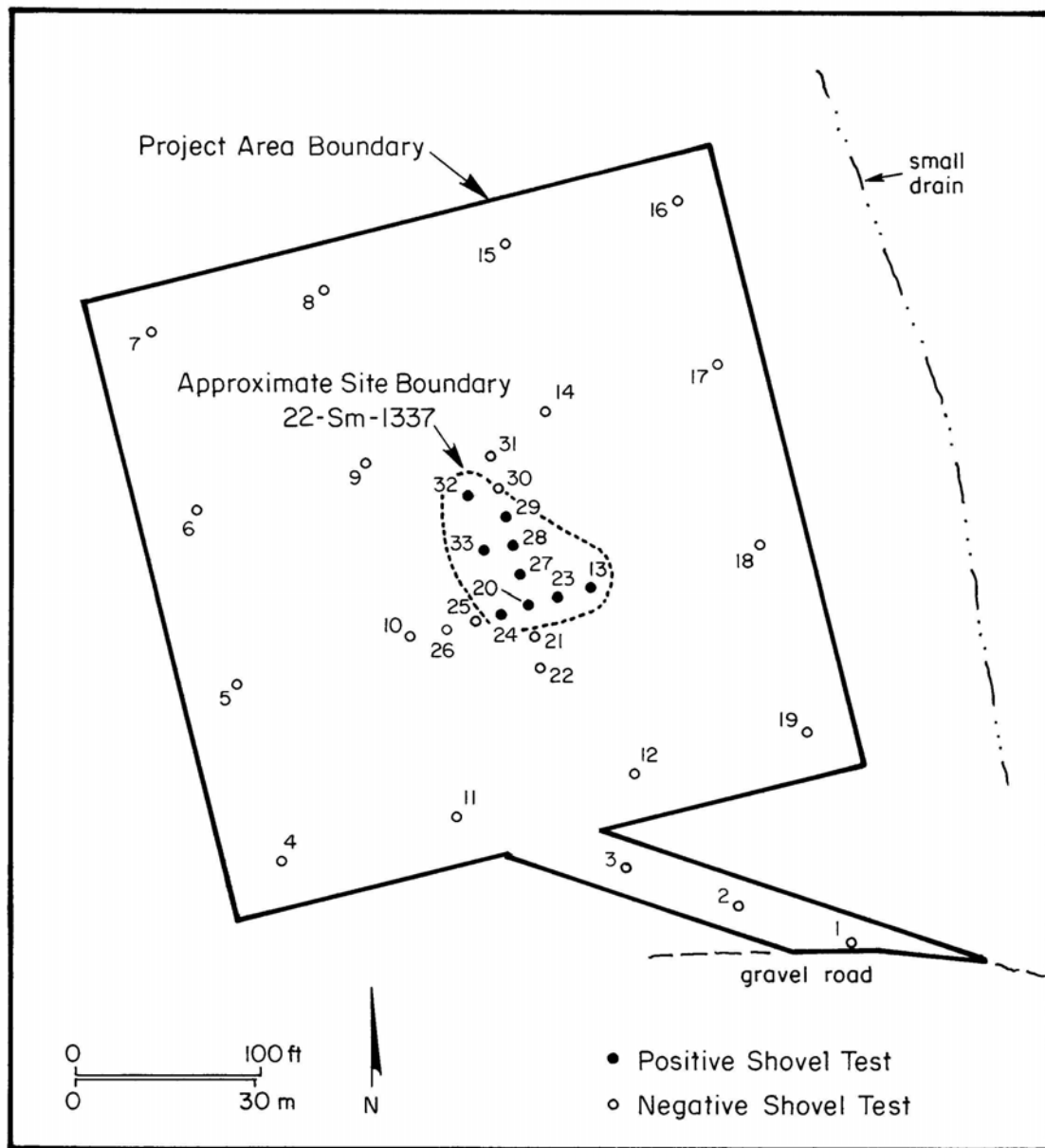


Figure 4. Shovel Test Locations

## RESULTS AND CONCLUSIONS

Examination of the files at MDAH and a discussion with Terry L. McClung at the Bienville National Forest revealed that no sites have been recorded in the project area, and the area had not been examined by a professional archaeologist. Two surveys (see *Previous Investigations* above) had been performed in the general area. Based on the proximity of the landform to Davis Creek and previous work in the area, the possibility of an archaeological site in the project area seemed high. This study located historic materials through shovel testing and on the surface. These items consisted of modern nails; two cut nails; fragments of clear aqua, and amber glass; bricks; sandstone; a nail spike; and one piece of window glass. It is obvious that a structure was present, and the assumption is that this site represents the remains of a house or logging camp that was occupied during the late 19<sup>th</sup> Century and/or early 20<sup>th</sup> Century. In addition, two chert flakes were found during the shovel testing phase of the survey. One is a late stage flake with 25% cortex, and it is made from heat-treated citronelle gravel chert. The other is a late stage flake with no cortex, and it is made from tan citronelle gravel. It is a late stage flake with no cortex. Since flakes are often found as isolated finds throughout the Bienville National Forest, these artifacts are viewed as an isolated occurrence rather than a separate prehistoric component. In general, the area was disturbed through the construction of an artificial terrace, push piles, and ruts. Site 22-Sm-1337 is not eligible for listing in the National Register of Historic Places. The approximate site boundaries are depicted in Figure 4, and the artifacts recovered are depicted in Table 1.



Table 1. Artifacts By Class

Artifact Class	Artifact Type	Provenience
Glass	Window Glass (n=1)	surface
	Aqua Glass (n=1)	surface
	Amber Glass (n=1)	ST 32
	Clear Glass (n=4)	ST 23 & 33
Ceramics	Whiteware (n=1)	ST 33
Metal	Wire Nails (n=21)	ST 23, 24, 25; 28, 29; 32, 33
	Cut Nails (n=2)	ST 33
	Nail Spike (n=1)	surface
	Unidentified Metal (n=4)	ST 20, 25, 29, 32
Brick	Complete Brick (n=1)	ST 29
	Brick fragments (n=8)	ST 30, 32, 33
Natural Materials	Flakes (n=2)	ST 25 & 30
	Sandstone Fragments (n=1)	surface
Bone	Cow Tooth (n=1)	ST 33

ST = Shovel Test

## **RECOMMENDATIONS**

Site 22-Sm-1337 is not considered eligible for listing in the National Register of Historic Places due to the disturbance of the project area, and the fact that historic homesteads dating to the 20<sup>th</sup> Century are very common in the area. It is, therefore, recommended that Sklar Exploration Company, LLC be allowed to proceed with drilling as planned.

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# APPENDIX I: SHOVEL TEST LOG\*

Shovel Test	Depth	Comments
01	20 cm	terminated at clay - negative
02	20 cm	terminated at clay - negative
03	20 cm	terminated at clay - negative
04	20 cm	terminated at clay - negative
05	20 cm	terminated at clay - negative
06	20 cm	terminated at clay - negative
07	20 cm	terminated at clay - negative
08	20 cm	terminated at clay - negative
09	20 cm	terminated at clay - negative
10	20 cm	terminated at clay - negative
11	20 cm	terminated at clay - negative
12	20 cm	terminated at clay - negative
13	20 cm	tan/yellow silty sand over clay four nails
14	20 cm	terminated at clay - negative
15	20 cm	terminated at clay - negative
16	20 cm	terminated at clay - negative
17	20 cm	terminated at clay - negative
18	20 cm	terminated at clay - negative
19	20 cm	terminated at clay - negative

Shovel Test	Depth	Comments
20	20 cm	tan/yellow sandy silt clay over an orange clay one piece of unidentified metal
21	20 cm	terminated at clay - negative
22	20 cm	terminated at clay - negative
23	20 cm	tan/yellow sandy silt clay one glass fragment and one nail fragment
24	30 cm	tan/yellow silty sand over clay two nails, one piece of unidentified metal, and one chert flake
25	20 cm	terminated at clay - negative
26	20 cm	terminated at clay - negative
27	20 cm	tan/yellow silty sand over clay one nail fragment
28	20 cm	tan/yellow silty sand over clay one brick, three nails, and one piece of unidentified metal
29	10 cm	tan/yellow silty sand over clay one brick fragment and one chert flake
30	20 cm	terminated at clay – negative
31	20 cm	terminated at clay - negative
32	30 cm	tan/yellow sandy clay silt two brick fragments, two nail fragments, one complete nail, two amber glass fragments, and one piece of unidentified metal

Shovel Test	Depth	Comments
33	40 cm	tan/yellow sandy clay silt two cut nails, five brick fragments, four clear glass fragments, one piece of whiteware, seven nail fragments, and one cow tooth

\* all tests dug below ground surface